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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,694	01/30/2002	Ronald Dean Cramer	8837Q	7032

27752 7590 04/27/2004

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EXAMINER

PADGETT, MARIANNE L

ART UNIT PAPER NUMBER

1762

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b> 10/060,694	<b>Applicant(s)</b> CRAMER ET AL.	
	<b>Examiner</b> Marianne L. Padgett	<b>Art Unit</b> 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Application citation of p.12, line 14 (in the context of lines 9-25+) to define the size range of “nanoparticles” as between 0 and 750 nm, removes the rejection of nanoparticle as a relative term.
2. Claims 1-8 and 12-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The relative term “high” as used in “high energy surface treatment” (claims 1 or 14), remains undefined, and rejected as stated inspection 1 of paper mailed 10/15/03. Applicant’s appear to be arguing (p.6 of 1/15/04 response) that because “high” is part of a compound term they don’t need to define its bounds, i.e. what constitutes “high energy”, and they cite p.32, line 5-9, as providing sufficient disclosure, however this citation only provide examples, which the term is explicitly “not limited to” and provide no metes and bound for what constitutes a high energy, hence applicant’s arguments fail to be convincing. Should the claims be considered inclusive of any technique that applies any additional amount of energy, or what amount of energy by the unlimited techniques is sufficient to be considered high?

Again, with respect to “gush”, an example is NOT a definition, and no one of any skill would necessarily conclude that a gush=5ml; after all water can gush art of a fire hydron, and it hardly does so in 5ml allotments! If applicants mean 5ml gushes, they can claim 5ml gushes, then there is no ambiguity of intended meaning, otherwise a gush is not a defined quantity. Claims 14-23 now contain this underlined gravity.

“Absorbent” added to claim 1, is rejected as relative (see section 1, paper number 10/15/03).

What is this absorbent article capable of absorbing?

The amendment to claim 1 is potentially contradictory of the previously present limitations, since it requires the “material comprised of hydrophobic . . . components” to be “at least a portion of an absorbent article” (emphasis added, note this is what is being treated, not the end product), therefore a part upto the entire absorbent article is being required to be hydrophobic. While as noted above, what the

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article may absorb is not defined, this would appear to exclude water and other aqueous or related materials. It would appear that applicants have not amended the claim to mean exactly what they intended. The preamble is for making the [hydrophobic] material hydrophilic, which would imply that the end product is intended to be the absorbent article, although no step positively required any hydrophilic properties be produced, but step (a) requires that the material (substrate) being treated already be a part (to all) of an absorbent article. Clarification in the claim is needed.

Claims 14-23 continue to have all the problems discussed with respect to claims 9-11, with the "liquid strike through" test having no clear effect. Less than or equal to 10 seconds to do what? To pass completely through, to be totally absorbed so none passes through, or what? The citation of p.3, line 30 (p.12 of applicants 1/15/04 response) when discussing Kusugai while confirming that "strike through" relates to moisture transport thus a substrate, still does not say whether it is necessarily transported or prevented from passing through.

It is noted that new claim 14 does not positively state whether or not the "hydrophobic..." material that has been "high energy" treated and coated with nanoparticles is now hydrophilic. If one assumes that "strike-through" means the indefinite amount of liquid (or 15ml thereof) runs through the material in zero to 10 sec, it could anything from remaining hydrophobic as the possibly porous or non-woven material may hold no liquid and it may run through in 0 sec flat or it could be highly absorbent and the liquid is absorbed through out the material, such that the excess passes through in 0-10 sec.

Clarification of intended meaning in the claims remains needed.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-2, 6-7, 12-17 and 21-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,645,569 in view of Bean et al (5,837,041).

Both sets of claims treat portions of articles that may be absorbent with like energy treatments, then deposit nanoparticles thereon, where the patent claims differ by using a common application techniques of inkjet printing, while the present case specifies no particular application technique, i.e. is generic. Conversely, the present claims specify that the surface to be treated is hydrophobic or borderline hydrophilic, while the patent claims are generic, thus inclusive of the specification hydrophobic tendency of the present claims, but apply identical treatments of energy and material, thus providing on expectation of producing the same results. Note in the current claims, while the results according to the preamble is a

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hydrophilic material, this effect is never positively claimed to be provide, and the "Strike Through Test" is not defined so that the examiner can say the product does any thing specific. It would have been obvious to one of ordinary skill in the art to apply nanoparticles of the present application via any conventional techniques useful for particle application of claimed size. Bean et al provide such an example, apply ink containing nanometer scale particles via an ink jet printer, where the examiner notes that ink is generally applied to products with absorbable surfaces, such as paper, which is disposable, hence is further motivated by being to analogues subject matter for broad claims.

5. Claims 1-8 and 12-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner appreciates the citations of support for amendments provide by applicants, and agree that p. 31 shows support for use in absorbent articles in general, and for the particular types claimed, but where is support for the process of treating the "hydrophobic...components" while they are part of that or even all of the "absorbent article" (that is already absorbent), with the energy and then the nanoparticles? The examiner did not find it in the cited support or in further review of the examples, etc. Unless support can be shown somewhere in the original 51 pages, the amendment to line 4 of claim 1 must be considered to include New Matter.

6. Verschueren et al (6,045,969; see section 4 in 10/15/03 rejection) starts with a hydrophobic support, which is not an absorbent article", processes the support with processes as in claims 1, 3-7 and 13 to make an absorbent article, such as a surface with areas capable of accepting lithographic ink. The amendment with its New Matter as written removes Verschueren et al as a 102 reference, however if the intent of the claim was to make an absorbent article, not start out with one already, then the 103 would remain if so claimed. Onodera et al (6,602,812 B1, section 8 of 10/15/03 rejection) similarly

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acquires its absorptive properties towards leukocytes after plasma treatment. Also applicants have provided 0-750 nm to define the size of nanoparticles supported by the specification, and leukocytes while small enough for the relatively used term, are above the provided range.

Huang (5,073,404, see section 5 of the 10/15/03 rejection), while creating a hydrophilic surface on a hydrophobic one, does not involve the treatment or making of an absorbent article, hence is removed by the amendment. Ohta et al (4,128,426), see section 6 of 10/15/03 rejection) is analogous to Huang in this respect, as is Kasugai et al (3,660,142; section 7 of 10/15/03 rejection) who improve the wettability (i.e. hydrophilicity) of the cloth or paper based substrate, but not for the purposes of absorption, so amended claims 1-8 are no longer applicable to Kasugai et al. However, new claims 14-23 do not required the substrate to be an absorbent article, either initially or after treatment, and the 'strike through Test' remains lacking a clear and supported explanation of what it means or its metes and bound.

7. Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasugai et al (3,660,142), as discussed in section 7 of the 10/15/03 rejection.

The last 3 line of new claim 14, which are further modified by claim 15-16, provide for the treated material to have a vague and indefinite property if so tested. The Test need not have been preformed in order for the product of the process to have the claimed characteristics, what ever they might actually be. The unclear of 3 unspecified quantities of liquid of unspecified properties or composition (i.e. it could be aqueous, an organic solvent, etc), can not be considered to provide patentable significance to any claimed process, because neither the procedure for the test nor its effect is clearly claimed, so as to provide any clear metes and bounds to the effect of the process, if such a test was preformed. Whether or not correcting these deficiencies will provide patentable significance, will only be determinable when the resultant metes and bounds are clear.

8. Other art of interest include Ueno et al (4,601,911) and Yahiaoui et al (5,945,175), who are making absorbent article using claimed nonwoven and textile material, with appropriate "high energy"

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treatment, but their applied material is not taught to be particulate or to be nanoparticles. Coles et al (6,641,569) is exemplary of copending cases to different inventive entities which disclose typical treatment for fabrics to effect wettability using nanoparticles or plasma.

9. Applicant's arguments filed 1/15/04 and discussed above have been fully considered but they are not persuasive.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available



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M. L. Padgett/af  
April 22, 2004  
April 26, 2004

A handwritten signature in cursive script, appearing to read "Marianne Padgett".

**MARIANNE PADGETT  
PRIMARY EXAMINER**